

Appl. No. : 10/510,875
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AMENDMENT TO THE CLAIMS

1. (Currently amended) A kit of parts comprising two or more protein kinase substrate polypeptides, each said substrate polypeptide having a sequence comprising a specificity conferring portion and a phosphorylatable portion, wherein the specificity conferring portion is recognized as a substrate by a protein kinase, and wherein the specificity conferring portion is different for each said substrate polypeptide, and a phosphorylatable portion, wherein the phosphorylatable portion of each said substrate polypeptide is SEQ ID NO: 6 having no residues substituted and is bound by a specific binding partner that is not an antibody specific for phosphotyrosine, phosphoserine or phosphothreonine, said binding partner having specificity for the phosphorylatable portion, either (i) only when the phosphorylatable portion is phosphorylated, or (ii) only when the phosphorylatable portion is not phosphorylated.

2. (Canceled)

3. (Currently Amended) A The kit of parts as defined in claim 1 wherein the phosphorylatable portion of at least one said protein kinase substrate polypeptide is phosphorylated.

4. (Previously Presented) The kit of claim 1 wherein each said protein kinase substrate polypeptide is of less than 40, 30, 20, 19, 18, 17, 16, 15, or 14 amino acids in length.

5. (Previously Presented) The kit of claim 4 wherein said protein kinase substrate polypeptide is 13, 12, 11, 10 or 9 amino acids in length.

6. (Previously Presented) The kit of claim 5 wherein the protein kinase substrate polypeptide is a substrate for a serine/threonine protein kinase.

7. (Canceled)

8. (Currently Amended) The kit of claim 1 further comprising the a specific binding partner.

9. (Previously Presented) The kit of claim 8 wherein the specific binding partner is an antibody.

10. (Previously Presented) An antibody specific for the epitope formed by the amino acid sequence of SEQ ID NO: 6.

11. (Previously Presented) An antibody specific for the epitope formed by the amino acid sequence LpSFAEPG (SEQ ID NO: 7).

12. (Currently Amended) A polypeptide of less than 13 amino acids in length wherein the polypeptide is not a fragment of glycogen synthase kinase 3, and wherein the polypeptide comprises a sequence comprising SEQ ID NO: 6 having no residues substituted and further comprising a specificity conferring portion, wherein the specificity conferring portion comprising comprises an amino acid sequence corresponding to a consensus sequence for a protein kinase, wherein and the sequence corresponding to the consensus sequence is positioned relative to SEQ ID NO: 6 such that the protein kinase phosphorylates the polypeptide at the serine residue of SEQ ID NO:6, and said consensus sequence is SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID: NO:2, or SEQ ID NO:5.

13. (Original) The polypeptide of claim 12 wherein the polypeptide is 13, 12, 11, 10, or 9 amino acids in length.

14. (Previously Presented) The polypeptide of claim 12 wherein the amino acid sequence corresponding to the consensus sequence extends to the N-terminus of SEQ ID NO: 6.

15. (Canceled)

16. (Currently Amended) A The polypeptide according to claim 12 in which the serine residue of SEQ ID NO:6 is replaced by phosphoserine.

17. (Canceled)

18. (Canceled)

19. (Withdrawn) A method for screening for protein kinases in a sample which may contain protein kinases comprising exposing a polypeptide as defined in claim 12 to the sample and determining whether and optionally to what extent said polypeptide is phosphorylated.

20. (Withdrawn) A method for assaying the activity of a protein kinase, comprising the steps of exposing the protein kinase to a polypeptide according to claim 12 and determining whether and optionally to what extent said polypeptide is phosphorylated.

21. (Withdrawn) A method of assessing the activity of a first protein kinase and a second protein kinase, comprising the steps of exposing the first protein kinase to a first polypeptide of a kit according to claim 1, and exposing the second protein kinase to a second polypeptide of a kit according to claim 1; and determining whether and optionally to what extent said polypeptide is phosphorylated.

22. (Withdrawn) A method for assessing the activity of a protein kinase, comprising the steps of exposing the protein kinase to a first (unphosphorylated) peptide of a kit of claim 1, and determining whether and optionally to what extent said polypeptide is phosphorylated.

23. (Withdrawn) A method for characterising the substrate specificity of a protein kinase, comprising the steps of exposing the protein kinase to a first polypeptide of a kit of claim 1, and exposing the protein kinase to a second polypeptide of a kit of claim 1; and determining whether and optionally to what extent said polypeptides are phosphorylated.

24. (Canceled)

25. (Currently Amended) The kit of parts according to claim 4 8 wherein the specific binding partner for the phosphorylatable portion of each said substrate polypeptide is the same.

26. (New) The kit according to claim 8, wherein the binding partner has specificity for the phosphorylatable portion, either (i) only when the phosphorylatable portion is phosphorylated; or (ii) only when the phosphorylatable portion is not phosphorylated.